

## Abstract

The present invention provides a solid electrolyte type fuel cell that can control a cross-over, and implements the high fuel efficiency and the high output of the fuel cell.

A substance is dissolved to a fuel 124, and does not permeate a solid polymeric electrolyte film 114. Because of this, on an interface between the solid polymeric electrolyte film 114 and the fuel 124 in a fuel electrode 102, an osmotic pressure in a direction from an oxide agent electrode 108 to a fuel electrode 102 is generated. Because of this, the water movement from the fuel electrode 102 side to the oxidizing agent electrode 108 side is controlled, and the cross-over of the fuel is controllable.